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(71)Applicant : SASAKI YUKINOBU

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(72)Inventor : SASAKI YUKINOBU

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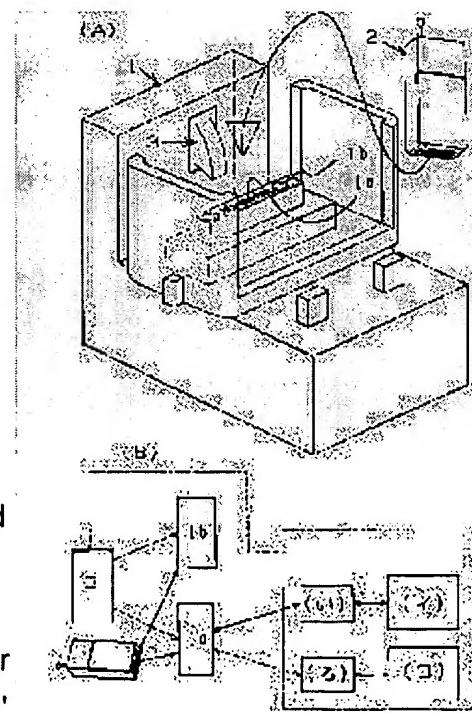
JP

(54) DATA MEMORY BACKUP SYSTEM FOR STORAGE MEDIUM FOR PORTABLE TELEPHONE, PHS OR THE LIKE

(57)Abstract:

PROBLEM TO BE SOLVED: To leave as many data for a user as possible, even when a portable information terminal is missing or defective by backing up the data only locally by the user itself and providing the form of the data daily available in use.

SOLUTION: In this data memory backup system, a charger 1 is designed, such that a charging terminal of a portable information terminal (mobile phone) is connected to a data connector, in response to charging of the portable information terminal to start charging, and a button provided to the charger is used to selectively back up data to a plurality of memories. The data are being backed up during the charging. After such a similar selection the data backed up in the charger are 'restored'



back to the mobile information terminal. The data backed up from the portable information terminal to the charger can be entered by using an image pickup element, while using a display menu of the portable information terminal as is, and the data can be backed up independently of the difference between data storage protocols for different models.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] It is related with the backup system of the storage information respectively prepared in the storage support prepared in small migration communication devices, such as a cellular phone, PHS, and a cordless phone.

[0002]

[Description of the Prior Art] The utilization frequency of small migration communication devices, such as a cellular phone, PHS, and a cordless phone, is increasing at an increasing tempo, the amount of the storage information respectively prepared in the storage support prepared in this equipment also increases, and importance has been increasing. Moreover, the information currently recorded on the storage support also increases, and it is also becoming real difficulty to leave duplications, such as a memorandum, as amount of information increases. In such a utilization condition, if storage information is lost by loss, failure, etc. of this equipment, the case lost the whole original will increase. As a way stage which solves such a problem, the technique which makes data transmission bidirectionally possible among these migration Communication Bureau at a small migration communication device, and sets storage information in this storage support as the object of the data transmission is indicated as indicated by JP,10-69436,A.

[0003]

[Problem(s) to be Solved by the Invention] However, the data which will be protected by the data transmission indicated by this JP,10-69436,A are stored in the database in this Communication Bureau, and it depends for the possibility of leakage of that data on that database management condition. By this invention, intrinsically, backup of data is put only on a user's own hand, and a user's data are as much as possible by offering the various gestalten which are moreover easy to use to offer data memory backup system for storage support it is made to remain also in the case of loss of this equipment, or failure, such as a cellular phone and PHS. That is, the charge terminal and the connector for data of a cellular phone can be connected, a battery charger 1 can be formed so that a charge initiation activity may start, and it can be made to back up selectively to two or more memory prepared in the battery charger with the carbon button prepared in this battery charger 1 according to charge actuation of a personal digital assistant (for example, it chooses any of the carbon button for backup for work, and the carbon button for backup for private they are). This backup activity can be done during the above-mentioned charge actuation. Next, the data made to record on a battery-charger side from a personal digital assistant by doing the restoration activity which returns the data stored in the personal digital assistant side by doing the restoration activity which returns the data stored in the battery-charger side after performing same selection actuation can input the display screen of a personal digital assistant with an image sensor as it is, and can save data uninfluential in a difference of a model difference data-accumulation protocol in this case.

[0004]

[Means for Solving the Problem] The means which carries out the information input of the storage

information on the storage support which carries out battery actuation of a cellular phone, PHS, etc. in the data memory backup system for storage support of this invention in order to solve the above trouble, A reading environmental control means to start the above-mentioned information input in relation to supply actuation of a proper at the time of the supply at the time of the current supply to the battery of this storage support, It is characterized by constituting from a selection means to choose this signal that carried out the information input, a memory means to memorize the signal chosen with this selection means, and the display memorized by this memory means, data output or a memory content activity means to restore. moreover, in the data memory backup system for storage support of this invention by another description The means which carries out the information input of the storage information on the storage support which carries out battery actuation of a cellular phone, PHS, etc., A reading environmental control means to start the above-mentioned information input in relation to supply actuation of a proper at the time of the supply at the time of the current supply to the battery of this storage support, A selection means to choose this signal that carried out the information input, and two or more memory means to memorize the signal chosen with this selection means, It is characterized by having chosen any of the signal memorized by these two or more memory means they were, and constituting the selected storage signal from a display, data output, or a memory content activity means to restore. moreover, in the data memory backup system for storage support of this invention by another description The means which carries out an information input optically through the display in which the storage information on storage support, such as a cellular phone and PHS, was prepared by this storage support, It is characterized by constituting from a selection means to choose this signal that carried out the information input, a memory means to memorize the signal chosen with this selection means, and the display memorized by this memory means, data output or a memory content activity means to restore.

[0005]

[Embodiment of the Invention] The cellular phone which showed the schematic diagram in which drawing 1 shows one example of this invention, and drawing 2 by drawing 1, and the partial amplification perspective view of a battery charger with a data transceiver function, The elements on larger scale of a connector part having shown drawing 3 by drawing 1, the side elevation for partial cross-section explanation in the condition that drawing 4 inserted the cellular phone in the battery charger with a data transceiver function, Drawing 5 shows the detail of the control key circumference. The partial amplification perspective view and (B) (A) a partial amplification side elevation and drawing 6 In order to make various cellular phones correspond, it is the perspective view for explanation showing that an advice member is prepared enabling free attachment and detachment, and drawing 7 is the decomposition perspective view of a battery charger with a data transceiver function. Moreover, in drawing 1, the outline of this invention is explained and it explains to a detail with reference to drawing 2 - drawing 10.

[0006] Drawing 1 (A) is the appearance of a data transceiver functional battery charger, and shows the circuitry simplified most by drawing 1 (B). That is, the charge terminal and the connector for data of a cellular phone are connected by inserting like the arrow head of this drawing as an object of charge of the personal digital assistant representing a cellular phone. Moreover, the control key 3 is supervising, the electrical-potential-difference supply (especially a detail is omitted in order to use the usual charging equipment) from the power source which is not illustrated to 1b is started corresponding to having been inserted correctly, and a charge initiation activity starts [whether the cellular phone was inserted correctly and]. moreover, two carbon buttons (being) prepared in the front front face of this battery charger 1 -- and (**) -- for example, -- (-- it is --) -- it can consider as the carbon button treating the data for work, and (**) can be used as the carbon button treating the data for private. This carbon button is a carbon button which can push either, for example, (being) when the carbon button is being pushed, the data for work saved in the memory in a cellular phone are saved automatically. and -- if preservation is completed -- as the mark of the termination -- (-- it is --) -- lower -- **** -- the carbon button which is pops up. On the other hand, in the case of the cellular phone with which the data for private are saved, a cellular phone is inserted in a battery charger 1 after pushing a carbon button [beforehand / (**)]. And

when backup is similarly completed, the carbon button of (**) pops up. The above shows an example which backs up the data in a cellular phone to a battery-charger 1 side. Next, an example of a restoration activity which returns the data by which the above was backed up to a cellular-phone side is explained. (Being) and (**) the condition that the carbon button is going up -- and it pushes on the bottom of the condition by which the cellular phone is inserted in the battery charger 1 (**). (being) For example, (**), supposing it pushes, are RISOTOA the private data backed up by the near memory of (**) in a cellular-phone side, and the carbon button will pop up after that. If the user itself is doing the clear activity for the inside of the memory of a cellular phone before this backup activity, the inside of a cellular phone will serve as only private data as a result. By the way, the line drawn with the alternate long and short dash line of drawing 1 (B) shows the monitor field of a control key 3. That is, the monitor is made so that a normal location may be equipped with a cellular phone and the above-mentioned backup activity and a restoration activity may be done only within a ***** case by the monitor of a control key 3. Although the above explanation shows the example which uses a battery charger 1 independently, it explains even the system adapting the detail and two or more battery chargers 1 of each configuration for embodying the outline shown by drawing 1 in drawing 2 - drawing 10.

[0007] First, in drawing 2, 1 is a battery charger with a data transceiver function, and, for the connector for digital data corresponding to a cellular phone in 1a (female), and 1b, the charge terminal for a connector type (female) and 1d of an advice member and 1e are [a control box and 3] control keys. The connector for digital data for 2 to be a standard cellular phone and for 2a, carry out signal transduction in a cellular phone on the other hand, (male), The charge terminal for a connector type by which 2b is connected to the built-in battery of a cellular phone (male), It is the pasting mold crevice by which 2c was carried out with the charge terminal for general at the tooth-back side of a cellular phone 2, and pasting wearing was carried out with adhesive tape 2f, and 2f of this pasting mold crevice supports the configuration of an edge where the control key 3 projected {in addition, 2f of this crevice may be formed in the body of a cellular phone from the time of manufacture}.

[0008] The battery charger 1 with a data transceiver function by the above configuration and the cellular phone 2 are associated like the next. 1d of advice members the both sides of connector (female) 1 for digital data a which is the member and was positioned between 1d of advice members and charge terminal (female) 1b for a connector type to which it shows the body of a cellular phone 2 While helping fitting of connector (male) 2for digital data a by the side of the cellular phone corresponding to these, and charge terminal (male) 2b for a connector type, it has the operation which performs attachment-and-detachment prevention of the direction of a twist (see drawing 2 - drawing 4).

[0009] The central connector side of control box 1e is equipped with the control key 3. By drawing 3 , this control key 3 is equipped with beak shape-like point 3A, as shown in the detail, this point 3A is supported rotatable at revolving-shaft 3B, and this rotation condition is supervised by location detection equipment 3C of point 3A which consisted of a light emitting device, a photo detector, and shield 3S. Furthermore, the location of point 3A is connected with plunger 3D in the location distant from revolving-shaft 3B. This plunger 3D is operating based on the command from control box 1e. Moreover, if a cellular phone 1 is inserted in the battery charger 1 with a data transceiver function in this plunger 3D and a normal direction, a digital data connector (male and female) and the charge terminal for a connector type (male and female) will fit in, and a control key 3 will engage with the crevice of 2f of pasting mold crevices simultaneously established in the location of the request by the side of the tooth back of a cellular phone 2. The actuation relevant to this control key is as follows (see drawing 4 and drawing 5).

[0010] [1] Refuse that a cellular phone 2 goes to a drawing up lower part by driving so that a control key may be set to projection condition 3T by plunger 3D (lower part refusal).

[2] Consider as the condition "put a cellular phone 2 with freeing the location of a control key by plunger 3D" (a lower part is possible).

[3] Free extraction and insertion of a cellular phone 2 by setting the location of a control key to condition of not projecting 3U, by plunger 3D (the upper and lower sides are possible).

[4] Make impossible balking of the cellular phone 2 inserted and completed (upper part refusal).

By the way, 3E is plunger 3D [3] It is the balking authorization switch made into a condition. moreover, rotation of this point 3A and ** -- although it explained taking the condition of [1] - [4] by actuation of plunger 3D as mentioned above, it is checked by the health check with information location detection equipment 3C, such as grasping the location condition of point 3A, and the cellular phone being normally inserted further, according to actuation of the plunger 3D, or not being inserted.

[0011] For example, when changing into the condition with a flexible plunger and a cellular phone is inserted, the location of point 3A passed 3F to 3G of a projection condition, entered deeply to 3H, and is stable again in the location of 3G. Furthermore, if stable even if it drives plunger 3D in the projection direction in the location of 3G, it can check that the cellular phone is inserted clearly. When [that] plunger 3D is driven in the projection direction and it is stabilized on the other hand in the location of 3F, it can check that the cellular phone is not inserted.

[0012] Thus, it can check whether the cellular phone is set correctly, is made to do the transceiver activity of digital data in connector (female) 1a for digital data, and connector (male) 2a for digital data in after a check, it sets at the time of this transceiver activity, and plunger 3D is [4]. By considering as an upper part refusal condition, an interrupted activity which an error generates during delivery of data can be prevented. Moreover, when connecting two or more battery chargers 1 with a data transceiver function and carrying out renewal of mutual data, it sets. [4] which prevents extracting the cellular phone which has already connected ** -- carrying out -- [1] which forbids insertion of a new cellular phone to still more nearly another battery charger 1 with a data transceiver function It can carry out. ** - thereby [in addition,] The situation that other cellular phones transmitted and received now interrupt during the data exchange between two or more cellular phones can be prevented. Moreover, in drawing 6, agreement 1v is a light emitting device which carries out color change at ******, is what was prepared in order that extraction and insertion of the above-mentioned cellular phone might enable visual distinction of this light emitting device 1v, and mentions the detail of ** and its actuation later in the explanation in drawing 9 . Moreover, in this drawing, 1d of advice members is prepared free [attachment and detachment]. Moreover, since a response in the appearance difference in a cellular phone is possible for 1d of advice members, it is creating two or more kinds of 1d [of forms]' according to the class of hope, while the dotted line's showed, and it becomes possible by exchanging some battery chargers with a data transceiver function to make it correspond to various manufacturers and models. The concrete block diagram of the battery charger 1 with a data transceiver function which has such an advanced security function of operation is shown in drawing 7 . Hereafter, it explains based on drawing 7.

[0013] Four cellular phones 2 and the battery chargers 1 with a data transceiver function which correspond respectively are prepared, it prepares outside if needed [{}] in this battery charger 1 with a data transceiver function, and the interface means S7 is formed in each. This interface means is a means which enables access to the memory part by which internal organs are carried out to the cellular phone 2 which is operating with two or more kinds of another protocols (the technique of **** is used).

Moreover, it is made to function according to this interface means S7 request also as a control means which supervises the fitting relation between a cellular phone 2 and a battery charger 1. Moreover, as for four interface means and personal computers P, run (LUN) connection is made. Moreover, the software environment which can operate LUN inevitably is given in the personal computer P (a **** technique is used for adoption (trademark), for example, Windows 95 etc.).

[0014] The block diagram of drawing 8 explains the condition of delivery of the data in the equipment shown by drawing 7 . The output of two or more interfaces S7 has two kinds of data output environments which are respectively equipped with two kinds, I and RO, and are different according to the object. "I of these two kinds of output environmental IRO" is work-related data output, "RO" can use as private data output etc. and, as for two or more kinds of this treatment, selection is fundamentally made according to the commander of a personal computer P. Moreover, each interface and the personal computer P of each other are connected, for example, are enabling mutual data migration with Computer P and the interface means A, or mutual data migration with the interface means A and the interface means B. Furthermore, such data migration classifies an output environment "an I group" and a "RO

group", and is carrying out possible [of the data processing].

[0015] In drawings said 8, the interface means S7 indicated by A-D above the drawing is established in a battery charger with a data transceiver function. Therefore, in the case of this drawing, the condition that four battery chargers with a data transceiver function are formed is shown. As for the data I/O from these interface means S7, "I" and two kinds of "RO" are prepared respectively, and I/O of the "I" forms the selection means S3 and input/output relation in the I group of Equipment P. Similarly, data I/O "RO" forms selection means S3' in the RO group of Equipment P, and input/output relation. It is as the round trip of data being realized by LUN of the above-mentioned [the above correlation], and the actual connection condition having been shown in drawing 7. Therefore, even when Equipment P should break down or it omits, the data of the above "I" and "RO" are enabling formation of input/output relation mutually by interface means S7 adjacent comrades, for example. In such a case, for example, when two or more cellular phones by one person are owned, one side can give a play as memory for the data backup of another side, and when it has three sets of cellular phones, it can be made to work so that either data of "I" and "RO" may be returned to one set of the remaining cellular phone which carries out memory of the data of "I" and "RO", and is used for the memory of two sets of cellular phones.

[0016] Moreover, it is possible for it not to be necessary to make the timing of the data backup of two or more above-mentioned cellular phones not necessarily correspond at the time of charge, and to carry out the data exchange to the timing of arbitration if needed. In the condition (for example, condition which is carrying out the completion of charge three sets) that a battery charger with a data transceiver function is mutually equipped with the 1st set, the 2nd set, and the 3rd set of cellular phones, and three sets of cellular phones cannot specifically take timing at the time of charge When carrying out the data exchange towards the battery charger with a data transceiver function of the 3rd set of cellular phones from the battery charger with a data transceiver function of the 1st set of a cellular phone So that backup directions may be attained for the 3rd set of the things linked to the battery charger with a data transceiver function of the 1st set of the cellular phone of a transmitting side It is possible for the interface means S7 established in the 1st battery charger with a data transceiver function to be operated, and for it to be made to perform data transmission and reception. In this case, the timing which directs the above-mentioned interface means S7 turns into timing of backup initiation of data. Although the above described the conditions using two or more cellular phones [when equipping a single battery charger with a data transceiver function with a single cellular phone and performing data transmission and reception] Since it corresponds to this condition supposing a case as energy supply time amount is restricted to day ranges etc. by supply of a solar battery when the charging time will be shortened dramatically in the future or It can be made to constitute so that data transmission and reception can be performed by the time amount of arbitration, without depending on the timing at the time of charge. For example, it is made to operate by specific time amount, such as making data backup carry out in midnight 3:00 every day etc., or it becomes possible to make data backup start to the timing which pushes the initiation carbon button (not shown) of operation beforehand prepared in the battery charger with a data transceiver function. Even when not dependent on the timing at the time of charge of such a battery charger with a data transceiver function, this battery charger with a data transceiver function in addition, only by equipping a battery charger with a cellular phone like the usual charge actuation The data which the charge conditions of the cellular phone with which it was equipped were fulfilled, and were memorized in the cellular phone with which it was equipped are transmitted to the memory apparatus of a battery charger with a data transceiver function, the conditions of an activity to memorize are fulfilled and data transfer and/or charge are started to desired timing.

[0017] Input/output relation is made to form the data of an I group, and the data of a RO group mutually to the selection means S3 and S3' in a place using time-division system or two or more I/O systems (a USB terminal or SCSI terminal) to Equipment P (actually one personal computer) (two or more personal computers may be used if needed).

[0018] In an I group, a motion of the data which reached the selection means S3 is explained below. The data of the selection means S3 choose which data of above-mentioned A-D, data are transmitted to Equipment P, and the data is transmitted and recorded on memory means S4 next. Furthermore, these

data are transmitted to the memory content activity means S5, and ** display, ** reinput, ** addition and subtraction, compatible processing between ** models, etc. are performed by this means. Required data are again re-recorded with a memory means after this processing, and the data edited into the memory of the cellular phone which the data of an I group flow backwards and is inserted in return and the battery charger with a data transceiver function further equipped with this interface means to the interface means S7 are rerecorded the origin of directions of a user, i.e., by giving directions on a personal computer actually. When the same processing is similarly made in a RO group and the memory of a cellular phone has only one line, only the data chosen by choosing any of an I group and a RO group they are are memorized into the memory of a cellular phone. Furthermore, flow drawing of drawing 9 shows the operating state of one example of this invention which consists of the above-mentioned configuration, and it explains to below. ***** -- it sets and SS1-SS7 show each stage. The start of a stage SS 1 first shows fundamentally the condition that at least one battery charger with a data transceiver function was connected with the equipments P, such as another battery charger with a data transceiver function, or a personal computer.

[0019] It is the stage which stands by until it detects whether the machine which needs charge containing a cellular phone on a stage SS 2 was connected to the battery charger, and when it detects that the cellular phone was inserted in the predetermined location of a battery charger with a data transceiver function, three actuation of the next stages SS3, SS4, and SS5 is started almost simultaneous. That is, on a stage SS 3, the transceiver actuation of data to the memory in a cellular phone is started, and lock actuation of forbidding addition of equipment or drawing is performed on a stage SS 4 by the lock function with which a fixed time amount battery charger is equipped. Moreover, on the stage SS 5, it means having started charge to the inserted battery of a cellular phone.

[0020] Moreover, when it has judged whether the data transceiver actuation in [above-mentioned / SS / 3] a stage was completed in SS6 and transceiver actuation is completed, the thing [having completed] is transmitted to the next stage SS 7. On this stage SS 7, prohibition is canceled for addition of equipment or drawing of the lock function with which the battery charger is equipped after that. It is made for it to become clear visually that will use the pop-up function added to this lock function, will pop up a cellular phone, and a user will bring up this case from the discharge condition of the above-mentioned lock function if transmission and reception of data complete the detail which has formed the stage SS 8 as an additional function and charge is completed finally. In addition, it can make it substitute instead of pop up to attach three kinds of chrominance signals of carrying-out authorization (O.K.) (or concomitant use). When using this signal, although red completes the prohibition on extraction and insertion in data transmission and reception and yellow has completed data transmission and reception, the condition of having not completed charge is shown, and blue makes those both sides that can accept data transmission and reception and charge being completed, or carrying out charge and data transmission and reception after this mean.

[0021] Drawing 10 shows the procedure of the backup explained in the outline of this invention explained with reference to drawing 1, and restoration in flow drawing. Hereafter, it explains in accordance with the flow of this drawing 10. it has started on the assumption that it says [that the cellular phone is inserted in a battery charger 1], and a stage SS 10 is established in a battery charger 1 in SS11 -- having had (being) -- it is the stage which checks whether one carbon button of the (**) was pushed, and whether neither of the carbon buttons is pushed. And when which carbon button is pushed, it shifts to a stage SS 12. namely, -- (-- it is --) -- backup is started by which memory of (**). Then, it shifts to a stage SS 14. the event of here backup being completed -- (-- it is --) -- actuation that the carbon button of (**) goes up is shown. Actuation that this carbon button goes up relates to selection of the aforementioned stage SS 11. On the next stage SS 16, if it is the object of only backup and termination, i.e., charge, will be completed at this event, it will use by drawing out from a battery charger without hesitation. Moreover, when charge is not completed, after consenting to it, it will draw out and use. the event of the phase SS 11 of the beginning when you want to newly restore data on the other hand once backing up -- (-- it is --) -- when one carbon button of the (**) is not pushed, it shifts to a stage SS 13. here -- for the first time -- as the object for restoration -- (-- it is --) -- the carbon button of

(**) is pushed. The data backed up at the side corresponding to the pushed carbon button are made for restoration to the cellular phone connected. the event of this restoration being completed on a stage SS 15 -- (-- it is --) -- it turns out that the exchange of data is ended because the carbon button of (**) goes up. An exchange of this data can also substitute the aforementioned signal. Next, this activity is ended when restoration is completed.

[0022] The top view of the backup unit which (a) of drawing 11 shows one example of the backup system of this invention, and (b) are the top views of the cellular phone made into the reading object. Moreover, (a) of drawing 12 is the partial cross-section side elevation of said backup unit, and (b) is the side elevation of said cellular phone. The description of a backup unit is explained based on drawing 11 - drawing 13 . A backup unit (a) consists of three configurations of the optical information input section A from a top, the data-processing section B, and the battery-charger section C.

[0023] The optical information input section A consists of a hood A1, a lens A2, image sensor (CCD) A3, lamp A4, and liquid crystal display monitor A5. Opening with it is prepared, and the shape of a rectangular-head drill carries out [the whole] horn ***** of the description of a hood A1, and a lens A2, image sensor A3, and lamp A4 are positioned by the inside again. [an inner surface is mirror finish and optical in the location corresponding to the display of a cellular phone] Lamp A4 is prepared in the pair opposite side with an effective area, and it is emitted, light diffusing the light source of lamp A4 to an effective area side, repeating the echo by mirror finish. By making into a reference beam the light source emitted to the effective area side, it is prepared in the opening side, a lens A2 is a lens which receives the reflected light of a display, and a lens A2 can receive the content of a display, without depending on the light source of lamp A4, when the display itself is the light source. CCD which is image sensor A3 picturizes the content of a display which received light with the lens A2, and mutual physical relationship is adjusted so that the image made from a lens A2 may be formed on the image pick-up side of image sensor A3. In addition, liquid crystal display monitor A5 is prepared in the outside surface by the side of the top-most vertices of a hood A1, the video information on the result processed in the data-processing section B mentioned later is returned, and it projects on this liquid crystal display monitor A5.

[0024] The data-processing section B is based on the image information obtained by image sensor A3, and the digital data obtained from the convention output of storage support. By one selection of a reading environmental control means S1 to determine the reading conditions of inputting the both sides of text selectively or simultaneous, and the environmental control means S1 When the input of image information is chosen, image information I read by image sensor A3 follows directions of this reading environmental control means S1. It is inputted into the following noise information clearance means S2, and the so-called noise components, such as a reading error with which it is dotted so much, and a frame of the display circumference, are removed among the data obtained by image sensor A3 here. Choice of data is carried out to the information on the need minimum which data transfer is made and should carry out memory to the following selection means S3 after this processing here. It consists of memory means S4 which memorizes the signal acquired through this selection means S3, and a memory content activity means. On the other hand, the text D by the digital data obtained from the convention output of storage support Based on the signal from the accumulation-of-electricity condition-monitoring means S6, by having recognized having shifted to the accumulation-of-electricity condition the remote control means which prepared beforehand the blowdown procedure of the storage information on storage support, such as directions and the cellular phone of this reading environmental control means S1, and PHS, as a function of this storage support is minded -- it is -- The procedure which discharges storage information as digital data according to the manual activity which pushes the function key formed in a user's own storage support is performed. Moreover, this digital data D is obtained by request using optical digital out. Thus, to the selection means S3, data transfer is made, choice of data is carried out to the information on the need minimum which should carry out memory here, the obtained digital data D memorizes the signal acquired through this selection means S3 by memory means S4, and, as for the memorized data, various activities are made by the memory content activity means. For example, the data which it is going to record on ** liquid crystal display monitor A5 now, and the data of arbitration,

such as already recorded data, are displayed. By this display, a user can check the data which should be recorded or can see a desired man's telephone number etc. from the recorded data. ** Reinput and this have proposed an activity means to reininput the digital data D of storage support, such as a cellular phone, to the storage section in storages, such as a cellular phone, through the reversal process of the process in which it inputs into a body. ** When carrying out a data input over multiple times, add addition and subtraction and this to before data, or they mean the processing which subtracts duplicate data. ** The compatible processing between models and this are processings which take the functionality in the case of carrying out the data I/O of those other than the model determined beforehand. In addition, with the accumulation-of-electricity condition-monitoring means S6 expressed here, it is because the optical sensing type switch SW formed when inserting a cellular phone b in the predetermined location of the battery-charger section C reacts. Or a cellular phone b is inserted in the predetermined location of the battery-charger section C, and the current for charge is because the condition that supply was made is detected through a terminal C1 after that to a cellular phone b. At least two gestalten can take.

[0025] In addition to the circuit which performs current control relevant to charge with the common battery-charger section C etc., the terminal C1 which outputs and inputs said digital data D from storage support is formed. Moreover, in the drawing location, the rotatable body section connector C2 is formed in the right shoulder of the battery-charger section C. Using this rotation function, when Body B changes into a straight condition on a drawing, an image is read, when Body B is leveled, it is designed so that digital data D may be outputted and inputted, and that selection of operation is made to be performed by directions of the reading environmental control means S1 as above-mentioned. Moreover, while the connection terminal C3 is formed in the center position of this connector C2 and the directions from the body section and an exchange of data are performed through this connection terminal The reader which has been designed by the body section B and the battery-charger section C suitably free [attachment and detachment], reads with the body section B in the condition of having seceded from live part C and the body section B, and consists of the sections A is miniaturized by separating the battery-charger section C. Moreover, while the current of a battery charger is enough acquired even if it secedes from the body section B and the battery charger section C since the battery-charger section C is made to charge also to the battery charger (not shown) formed not only in charge of said cellular phone (b) but in the body section B, it is made that a user uses it, carrying.

[0026] Although explained, in said example corresponding to drawing 11 - drawing 14, as a compound die for digital data D and two data of an image data I this invention Not the thing limited to the compounded example but the system which records the above-mentioned image data I, Carrying out single utilization of each with the system which records digital data D, or both the equipments that were compounded can be separated suitably, and it can consider as standalone version voice, and can be used independently. In the data-processing section B, the noise information clearance means S2, the selection means S3, etc. can be omitted, and it can be made a simple input gestalt. The optical information input section A can also use a digital camera, the CCD camera prepared as an adapter for personal computers. Data transmission can be performed for the image data obtained from the optical information input section A to memory means S4 through a simple image information compression process. In addition to ** which raised the example to the memory content activity means S5 - **, **OCR (optical character reader) function may be given. the cordless handset of the type which cannot be inputted by that cause if it is not an image -- it becomes possible to input in image the address book data currently recorded on the telephone, and to move to the model which can treat another digital data in the format of digital data D after that.

[0027] The configuration of the data-processing section B form the opening A6 (refer to drawing 13) with which a hand touch the part of keyboards , such as a cellular phone , in a rectangular parallelepiped , and it enable it to touch with it keyboards and function keys , such as a cellular phone which be an object for an input , carefree in said example corresponding to drawing 11 - drawing 14 at the time of data I/O . Since opening A6 is formed for such the object, if the same conditions as that opening A6 can be made, the configuration of the case of this data-processing section B can give various

configurations, such as the shape of the shape of a character of KO, and L character. Moreover, this backup unit (a) can form the keyboard for a preliminary input for any of three configurations of the optical information input section A, the data-processing section B, and the battery-charger section C being as occasion demands from a top, or the connection terminal for a reserve keyboard can be prepared. This backup unit (a) can dedicate all the processing circuits of the data-processing section B in the optical information input section A from a top, and can make them a smaller gestalt, and thereby, data backup can be serially performed, even if it does not return to the base ground.

[0028] In addition, the procedure which inputs the text by digital data in the explanation in said drawing 14 has the high need which can be used also in other models in a real activity, although the communications protocol of a data input, the transposition of text, etc. are explained between a cellular phone b and this machine as that to which transposition is performed beforehand. In that case, supplementary information is carried out about the input of the digital data D which can be set. First, when it divides roughly, there are these two kinds, and as for digital data, an output is made by request from a cellular phone through the optical communication and the means of communications by the electric wave which are connected with the approach of inputting through the connection terminal C1 with which the digital data D was formed in the battery-charger section C as aforementioned through the usual telecommunication cable. However, since this output changes with between manufacturers, it is necessary to carry out that compatible processing, and this compatible processing needs compatible processing also for the output side in the time of an input, and the case of returning that data to a cellular phone again. Compatible processing of this output side is as having explained as 1 actuation of the memory content activity means S5. On the other hand, compatible processing at the time of an input is performed through the interface means S7. The content of processing makes the sequential selection of the communication link connection protocol according to {1} each model, and performs it. The sequential selection of the compatible processing of the text data according to {2} each model is made, and it is performed. Performing soft-ware connection processing in the case of performing a data input through {3} personal computers etc. is proposed.

[0029] Drawing 15 makes it a trigger to have been acquired the wearing conditions to the battery charger 1 with a data transceiver function in the digital data D which is the storage information on the storage support which carries out battery actuation of a cellular phone, PHS, etc., it is an example of the circuit which outputs and inputs digital data D, and the 3rd example which shows an example which performs the charge to the battery formed especially in the storage support side and the both sides of I/O of digital data D by non-contact is shown. Furthermore, in this drawing, the data stored in memory means S4 have taken the configuration which makes a digital input/output possible to indoor AC wiring through the cable for plug sockets of the home alternating current AC power of this battery charger 1. Since the quick nature by which charge is immediately started only by inserting telephone bodies, such as a cellular phone, in the socket of that battery charger is usually required when a user demands charge, as for this kind of battery charger, it is [a battery charger] common that connection is always made to AC plug socket which is indoor AC power supply. The description of the battery charger of such always connecting to a plug socket agrees on the conditions of the digital input/output using indoor AC wiring.

[0030] The basic configuration of the 3rd example of the above is explained below. The telephone body TP consists of the next configuration. Namely, the Time Division Multiple Access circuit TDMA which carries out time-division multiplexing processing of the transmit information for the codec circuit ADPCM which performs speech processing, and a call The phase-locked loop circuit PLL which sets up the carrier frequency of the wireless for a call A telephone side memory means TPRAM by which individual humanity news, such as text information transmitted with the frequency circuit RF and the telephone number for transmitting and receiving the wireless for a call, or an electronic mail and image information, is pooled the electromagnetic-induction information transceiver section DJ 1 which enables digital transmission and reception electromagnetic-induction information transceiver section DJ1' in which the above-mentioned telephone side memory means TPRAM was formed at the battery-charger 1 side with a data transceiver function, and mutual -- and It consists of circuits, such as the memory circuits EEPROM and SRAM which write in the electromagnetic-induction receive section DJ 2 for

power which enables charge of the battery by the side of the telephone body TP by non-contact and the central processing unit CPU which controls an above-mentioned component circuit, a control program, and required data.

[0031] Thus, the battery charger 1 with a data transceiver function which receives the constituted telephone body TP In the basic configuration explained by drawing 1 - drawing 10, in addition, electromagnetic-induction information transceiver section DJ1' which enables digital transmission and reception for individual humanity news the telephone body TP side further, The cable to electromagnetic-induction transmitting section DJ2 for power which sends power energy to the electromagnetic-induction receive section DJ 2 for power by the side of the telephone body TP, and an indoor AC plug socket is used. It has additionally the digital-input/output circuit ACLUN for AC wiring which enables LUN (run) connection to indoor AC wiring. moreover, electromagnetic-induction information transceiver section DJ1' which enables digital transmission and reception for individual humanity news the telephone body TP side especially -- and Electromagnetic-induction transmitting section DJ2' for power which sends power energy to the electromagnetic-induction receive section DJ 2 for power by the side of the telephone body TP So that it may function only on the conditions on which insertion was made to the pocket part which receives a telephone body TP like 1d of advice members which the telephone body TP was formed in the battery charger 1 with a data transceiver function, for example, illustrated all by drawing 2 Electromagnetic-induction information transceiver section DJ1' and electromagnetic-induction transmitting section DJ2' for power It is arranged in the suitable location on the body of a battery charger 1 (preferably). The electromagnetic-induction information transceiver section and the electromagnetic-induction transmitting section for power are considering as the same part. For example, that an advantage, such as making it possible to make an induction coil common, may be born, although the telephone body TP and the battery charger 1 with a data transceiver function are separated It constitutes so that digital transmission and reception of individual humanity news may not be performed to the telephone body TP side on the conditions which do not wish (in addition, the above-mentioned electromagnetic-induction information transceiver section DJ 1 and DJ1'). It is possible not only electromagnetic induction but to consider as the two-way communication by light, the two-way communication by the feeble electric wave, etc.

[0032] Furthermore, memory means S4 prepared in the battery charger 1 with a data transceiver function in the 3rd example of the above The property of a general-purpose IC card is harnessed by considering as a removable IC card. Since it can use for various telephones, such as home use and a telephone for clerical work, and a public telephone, etc. or can use for facsimile, a walkie-talkie, etc. with which the function of these telephones and parts is shared further using this IC card It becomes possible to utilize the storage information on telephone for various telephones, the various communication equipment which has a public area functionally general-purpose. Moreover, an IC card can be used as a magnetic card or an optical card according to a request.

[0033] Furthermore, the above-mentioned memory means S4 is constituted so that two or more are recording of the big image information to which the memory capacity of dozens times or more is given to at least, and only one image is made as for an input within the telephone side memory means TPRAM can be carried out as compared with the telephone side memory means TPRAM. Moreover, to the data transfer as usual "copy", when the image information more than the amount of data set up beforehand is transmitted to electromagnetic-induction information transceiver section DJ1' through the electromagnetic-induction information transceiver section DJ 1 from the telephone body TP, it can set to the telephone body TP side so that the image information of the big amount of data may not remain and processing of "migration" may be performed. Allowances come to increase to the memory space within the telephone side memory means TPRAM only by inserting the telephone body TP in this battery charger 1 with a data transceiver function by adding conditions to such data transfer.

[0034] As indicate in this drawing 15, memory means S4 of the battery charger 1 with a data transceiver function be able to form the function key for being able to add the processing like software in postscript mold mode , the date sort mold restoration mode , significance criteria mold restoration mode , the subscription mode of deletion propriety information , etc. according to a request , and choose these

modes in a battery charger front face , when large as compared with the telephone side memory means TPRAM . That is, if the above-mentioned postscript mold mode chooses this mode, unless the telephone body TP will only be inserted in the battery charger 1 with a data transceiver function, it can make it constitute so that data may increase in postscript as long as memory space allows unless only new data are added and setting-out modification is changed from the memory information within the telephone side memory means TPRAM and it will change setting-out modification, it prevents also from deleting. With the above and the date sort mold restoration mode, in case the telephone body TP is inserted in the battery charger 1 with a data transceiver function [when an information input is made with the date data, it restores this stored data into the telephone side memory means TPRAM after that and all are recording information has not entered on the problem of memory space] It is the mode in which restoration is made to be carried out to order by the date data at the time of are recording within possible limits toward the past from the latest data. Significance criteria mold restoration mode is the mode which restores a part for possible amount of information from the one where the significance is higher according to the significance which a user inputs himself instead of the above-mentioned date. In addition, by constituting so that significance may be made to increase from a telephone side automatically to the overlapping data among the data copied to a battery-charger side Significance is controllable in addition, and further, whenever it carries out the call corresponding to the telephone number accumulated into the telephone side memory means TPRAM accumulated into the telephone body TP The count frequency data of a call by making it accumulate into this memory means TPRAM You can enable the automatic input of the significance data which used the count frequency of a call automatically, and can make it reflected also in the following deletion propriety information possible [operating the above-mentioned significance criteria mold restoration mode using this significance]. When subscription mode of deletion propriety information is classified with the data which do not carry out deletion hope of the high significance bordering on 50 points with the aforementioned significance, and the data with which significance can delete the data of less than 50 points, and newly prepares a deletion carbon button in the battery charger 1 with a data transceiver function and this carbon button is pushed, only the data in which the above-mentioned deletion is possible are removed. Or when the memory space of memory means S4 exceeds a limit, it is the mode in which eliminate serially the data in which the above-mentioned deletion is possible, and new data are received. In addition, it is also still more possible to use it combining two or more above-mentioned modes.

[0035] The 3rd example of the above constituted as mentioned above is equipped with the following descriptions.

- the electromagnetic-induction circuit for the power for digital data D and charge of the lower part edge of the telephone body TP (the electromagnetic-induction information transceiver section DJ 1 which enables digital transmission and reception -- and) The electromagnetic-induction receive section DJ 2 for power which enables charge of the battery by the side of the telephone body TP by non-contact is formed. And in order to charge this telephone body TP, the lower part part of this telephone body is accepted in the body of a battery charger. It can constitute so that electromagnetic-induction information transceiver section DJ1' and electromagnetic-induction receive section DJ2' for power may be mostly performed also to the lower part end face of the concave part to guide in the same part. By that If duplication utilization of two or more above-mentioned functions can be carried out with the same electromagnetic-induction coil and one condition about positioning is also met by request, the point that two kinds (the object for power, for data) of transfer may be performed is equipped with the description.
- The data stored in memory means S4 by the side of a battery charger for example, like the graphic display of an IC card (this can be considered as a general memory card, a hard disk mold card, etc.) of drawing 15 By inserting in the connector section (not shown) beforehand prepared in the body of a battery charger The storage element in this IC card can be used as memory means S4. By using it, carrying to a desired machine (for example, a personal computer, facsimile, a digital camera), and making [drawing out this IC card] it move to it, after storing the data from a telephone body It becomes possible to carry out compound utilization of the data, such as the image data and voice which came to hand by the telephone body, an address, and a name.

- The same data as the above by using the digital-input/output circuit ACLUN for AC wiring It becomes the personal computer and the other communication link machines which formed separately the same digital-input/output circuit ACLUN for AC wiring connectable in digital one. As the result in the same house The data memorized by memory means S4 by the side of a battery charger can be made to be able to transmit without lengthening a digital cable substantially, and it can use with a personal computer etc. Furthermore, rememorize is able to process the same data, to make it transmit to the same or different memory means S4 of a battery charger according to a request, and to make it. By the way, the data stored into the telephone body which is represented by the cellular phone, and which can be carried In the actual condition of being forced utilization of charging every day, feeling easy about a perfect charge condition, and carrying It adds to the description to which the auto backup of the data within the memory means TPRAM within a telephone body is carried out every day, without adding new action especially. Furthermore, when you want to carry out various processings from the memory information with a personal computer etc., the description which can use immediately the data which already carried out backup completion will be equipped. Moreover, such convenience uses the conditions that the battery charger is always fundamentally connected mostly to the AC power in a house.

[0036]

[Effect of the Invention] The means which carries out the information input of the storage information on the storage support which carries out battery actuation of a cellular phone, PHS, etc. in this invention, A reading environmental control means to start the above-mentioned information input in relation to supply actuation of a proper at the time of the supply at the time of the current supply to the battery of this storage support, Since it constitutes from a selection means to choose this signal that carried out the information input, a memory means to memorize the signal chosen with this selection means, and the display memorized by this memory means, data output or a memory content activity means to restore data backup should do along with periodical charge actuation -- since it can back up upwards in half-enforcement and periodically as the result and the data remains to a user -- loss of data, and leakage -- being reliable .

[0037] Moreover, the means which carries out the information input of the storage information on the storage support which carries out battery actuation of a cellular phone, PHS, etc. in this invention by another description, A reading environmental control means to start the above-mentioned information input in relation to supply actuation of a proper at the time of the supply at the time of the current supply to the battery of this storage support, A selection means to choose this signal that carried out the information input, and two or more memory means to memorize the signal chosen with this selection means, Since it chooses any of the signal memorized by these two or more memory means they are and the selected storage signal is constituted from a display, data output, or a memory content activity means to restore Since data backup was made along with periodical charge actuation, it could back up upwards in half-enforcement and periodically as the result and two or more memory means which are the storing locations of backup information are established A record location is changeable, choosing according to the content of record. Since two or more kinds of backup data make it possible to remain to a user and to perform restoration processing from the memory means of further the above-mentioned plurality by purpose-oriented to this storage support after [reliable] loss of data, or leakage From the data of a large quantity, or various data, only required data are carried and come be made.

[0038] Moreover, the means which carries out an information input optically in this invention by another description through the display in which the storage information on storage support, such as a cellular phone and PHS, was prepared by this storage support, Since it constitutes from a selection means to choose this signal that carried out the information input, a memory means to memorize the signal chosen with this selection means, and the display memorized by this memory means, data output or a memory content activity means to restore Since all equipments are mostly equipped with the indicating equipment which displays the memorized information also by the storage support which has not prepared the design whose storage support may output the memorized information to the exterior, backup of data is made to be obtained by minding the indicating equipment.

[Translation done.]

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] The schematic diagram showing one example of this invention.

[Drawing 2] The partial amplification perspective view of the cellular phone shown by drawing 1, and a battery charger with a data transceiver function.

[Drawing 3] The elements on larger scale of the connector part shown by drawing 1.

[Drawing 4] The side elevation for partial cross-section explanation in the condition of having inserted the cellular phone in the battery charger with a data transceiver function.

[Drawing 5] The detail of the control key circumference is shown, for (A), it is the partial amplification perspective view, and (B) is a partial amplification side elevation.

[Drawing 6] In order to make various cellular phones correspond, it is the perspective view for explanation showing that an advice member is prepared enabling free attachment and detachment.

[Drawing 7] The decomposition perspective view of a battery charger with a data transceiver function.

[Drawing 8] The block diagram explaining the condition of delivery of the data in the equipment shown by drawing 7.

[Drawing 9] Flow drawing showing the operating state of one example of this invention

[Drawing 10] Flow drawing showing the procedure of the backup explained in the outline of this invention explained with reference to drawing 1, and restoration.

[Drawing 11] The top view of the backup unit which (a) shows one example of the backup system of this invention, and (b) are the top views of the cellular phone made into the reading object.

[Drawing 12] It is the side elevation which incorporates a cellular phone (b) in a backup unit (a), and is carrying out reading actuation, and some backup units are made into the partial cross section.

[Drawing 13] It is the front view of drawing 12, and in order to clarify the screen, data display is carried out to the part of a liquid crystal display.

[Drawing 14] It is a block diagram explaining the whole system of a backup unit.

[Drawing 15] It is the block diagram showing the 3rd example of this invention.

[Description of Notations]

a [-- A hood, A2 / -- A lens, A3 / -- An image sensor, A4 / -- A lamp, A5 / -- Liquid crystal display monitor] -- Backup system, b -- The cellular phone, C which were made into the reading object -- The battery-charger section, A1

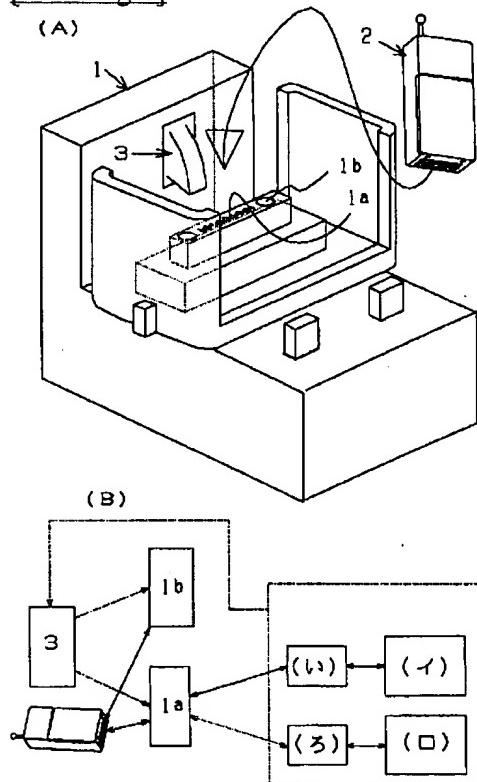
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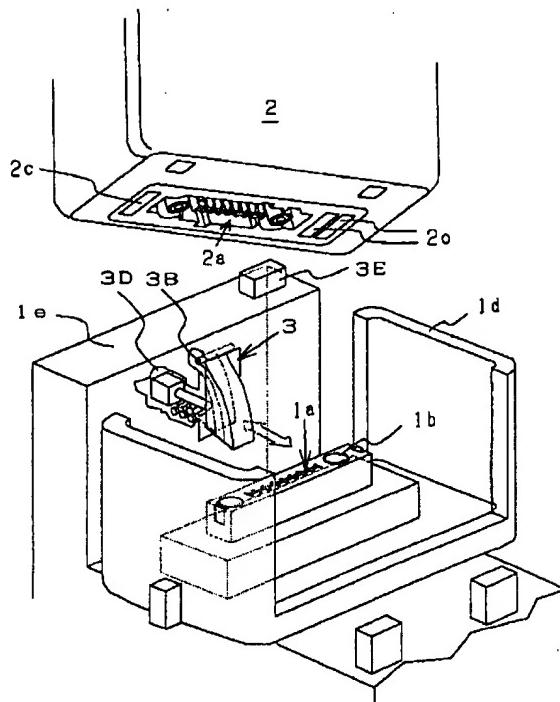
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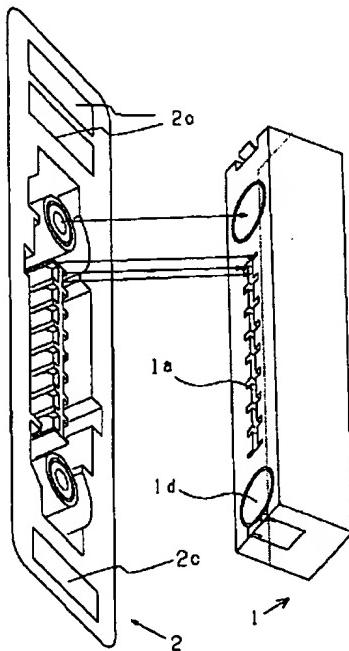
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DRAWINGS

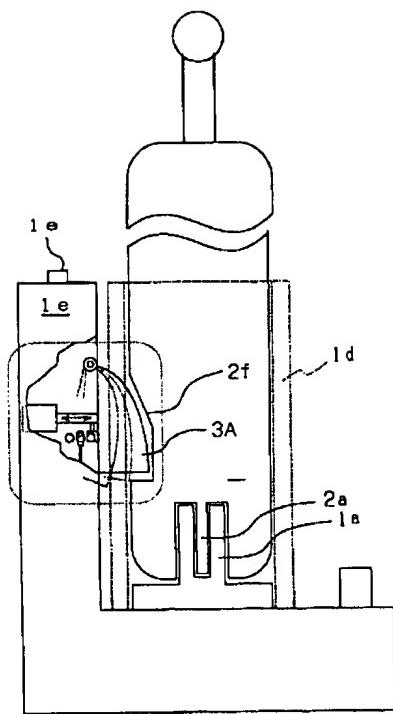
[Drawing 1]**[Drawing 2]**



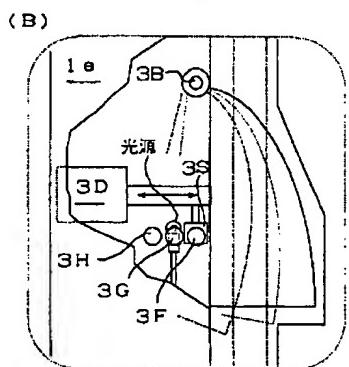
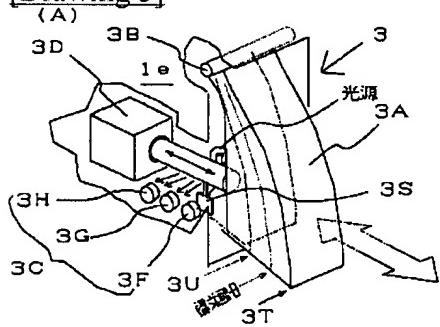
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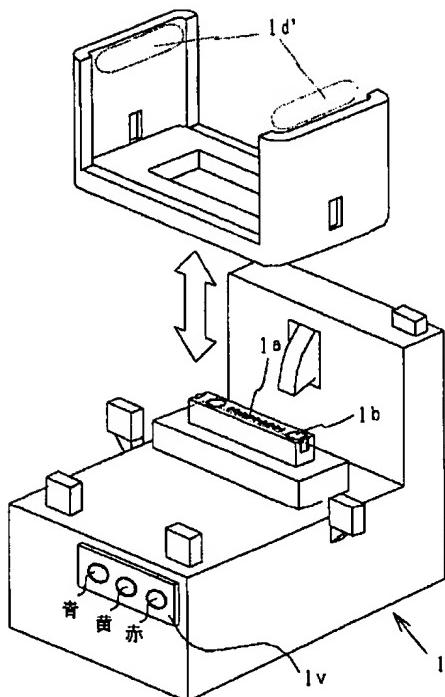
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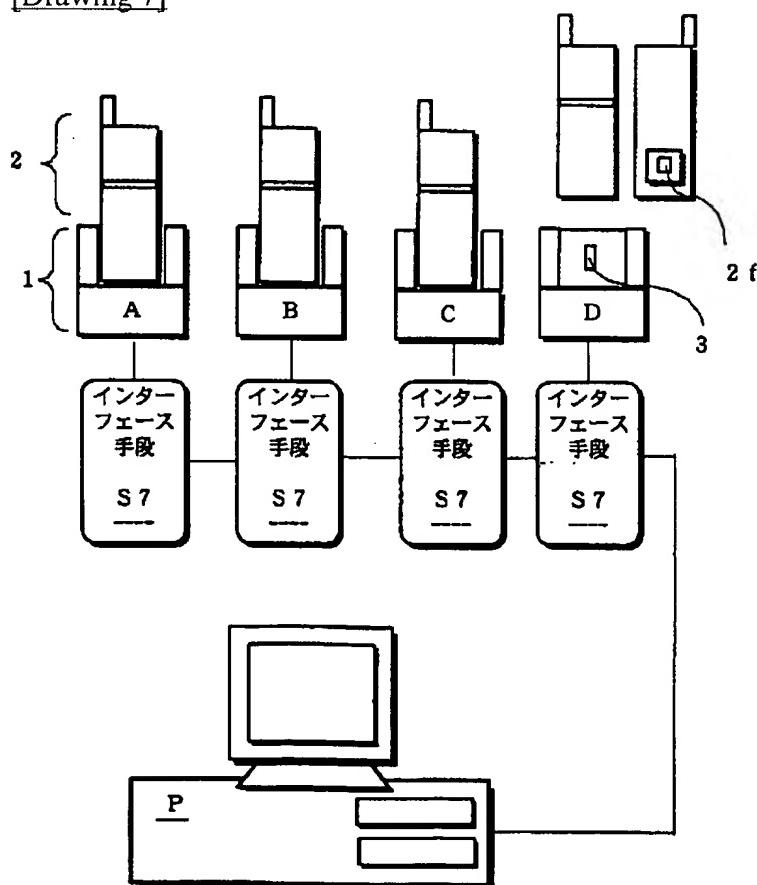
[Drawing 5]



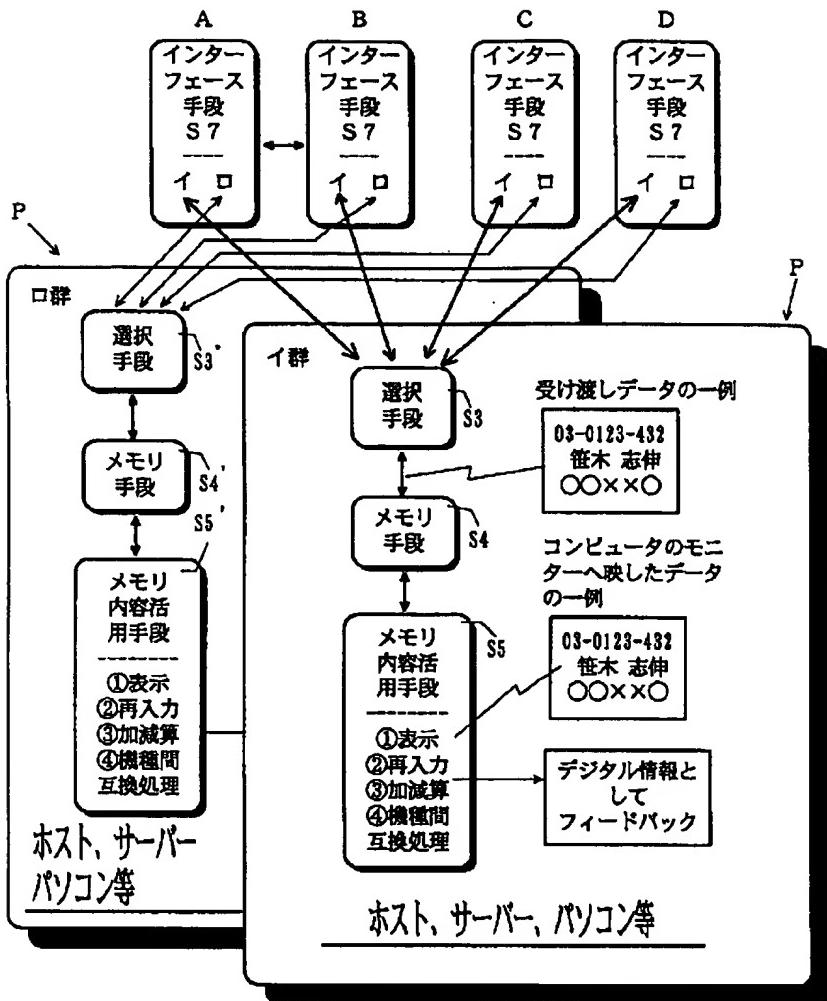
[Drawing 6]



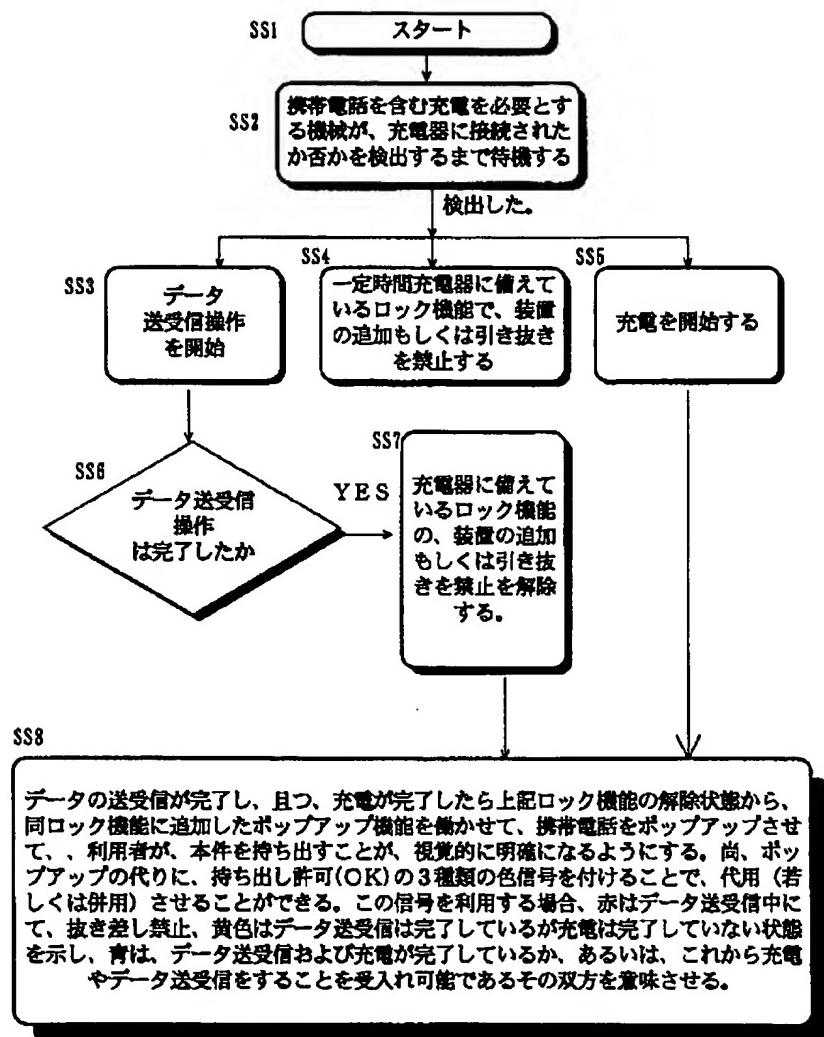
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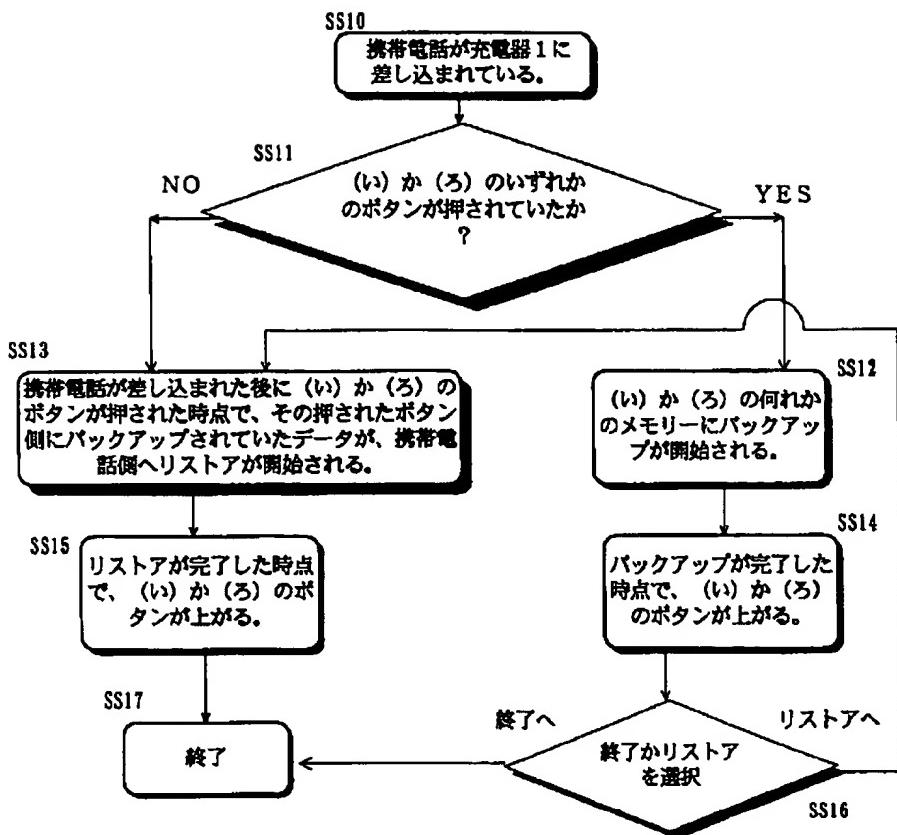
[Drawing 8]



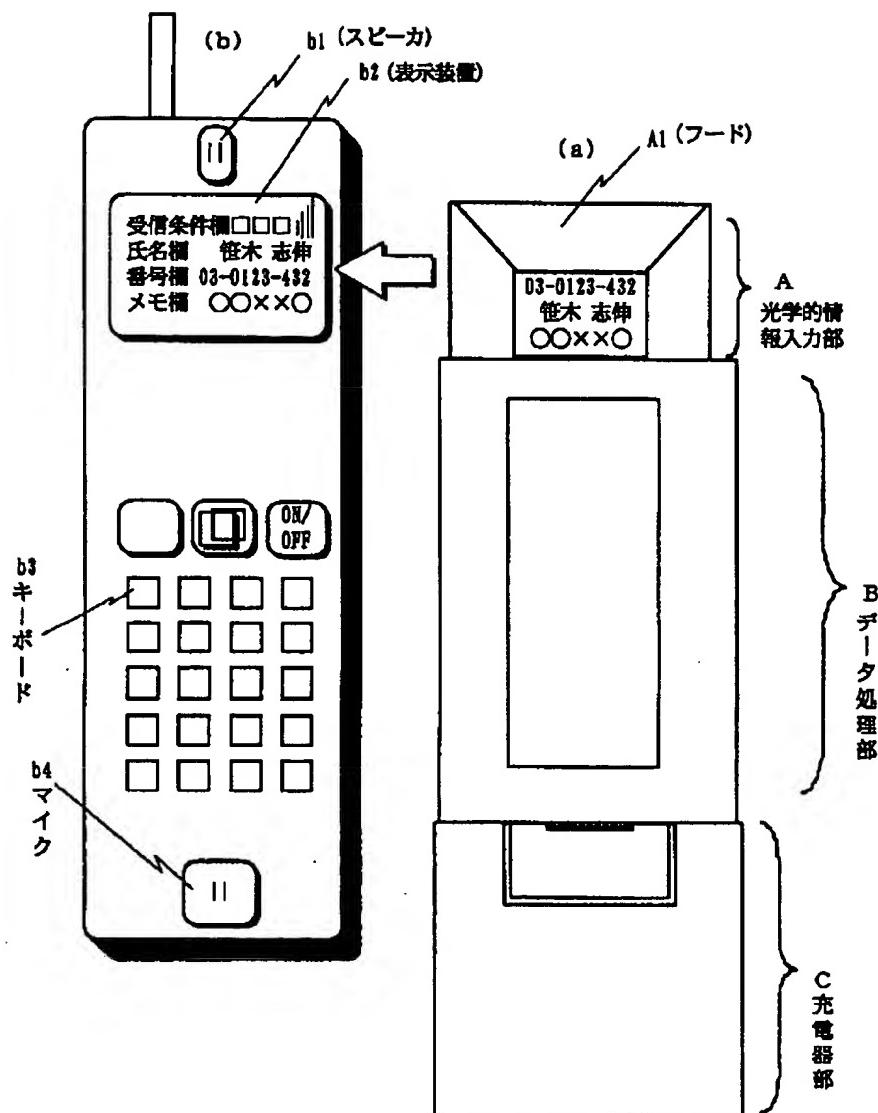
[Drawing 9]



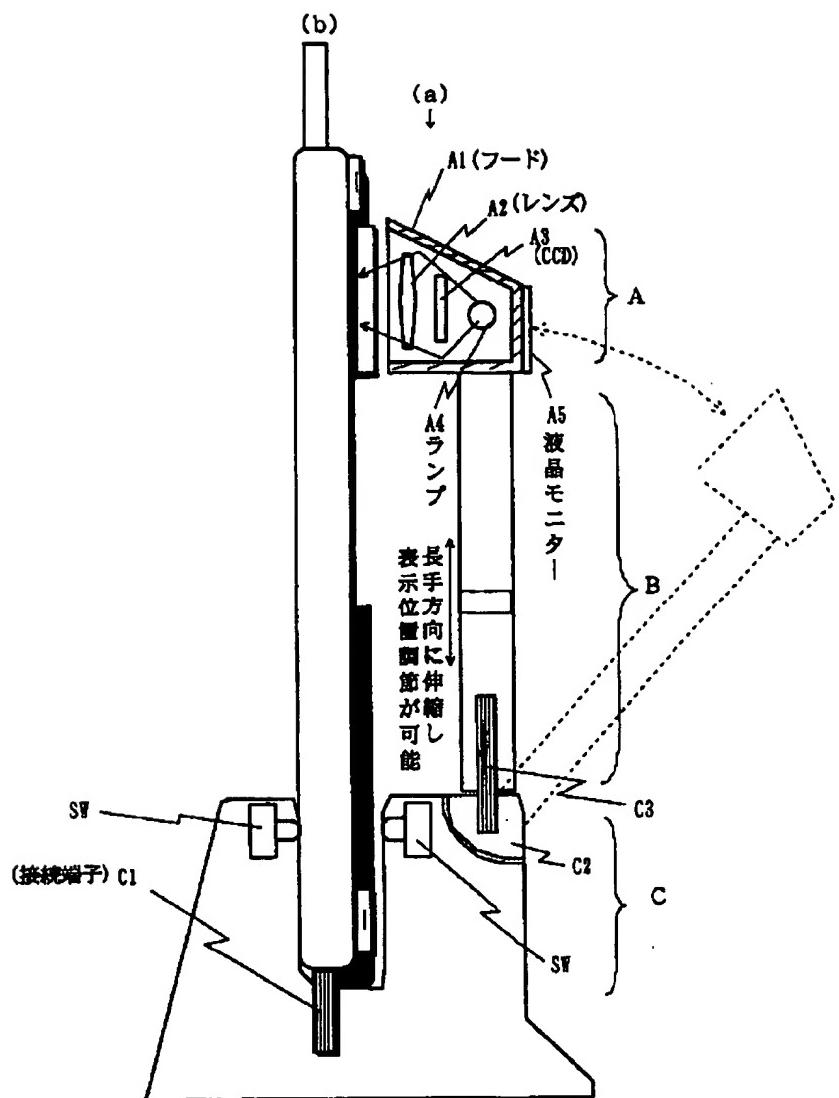
[Drawing 10]



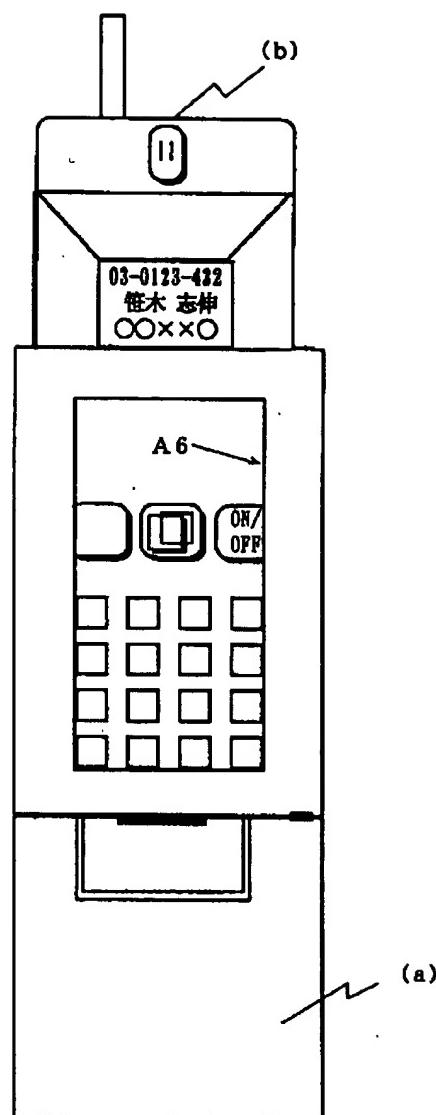
[Drawing 11]



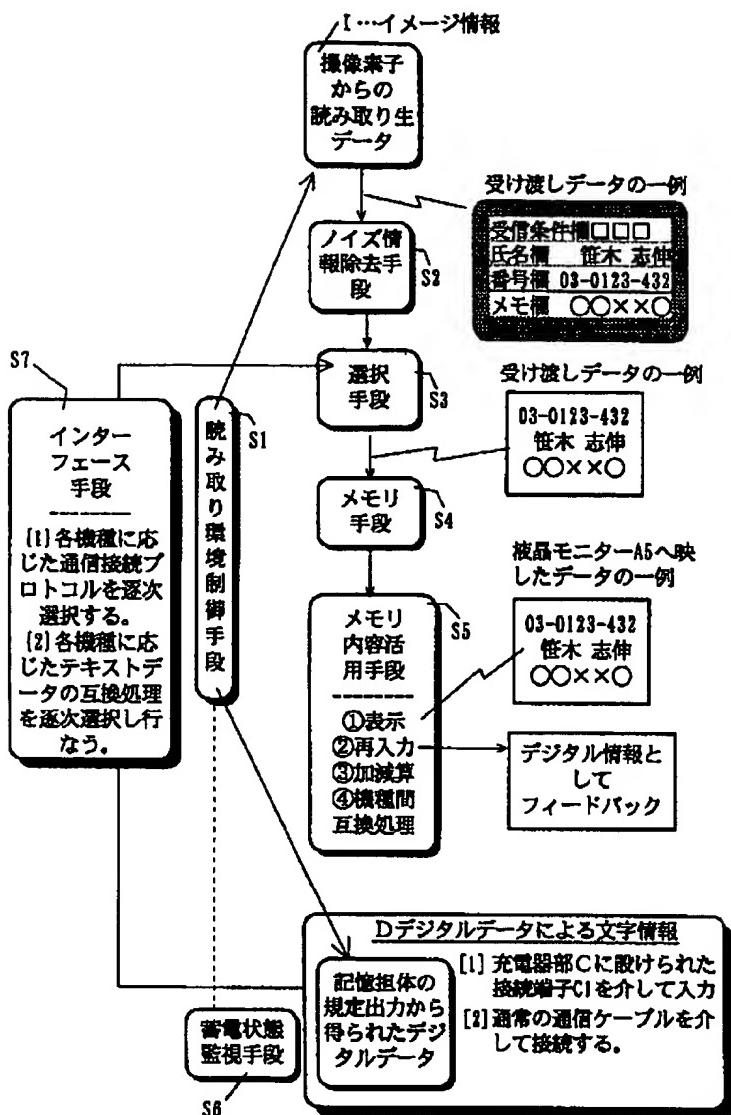
[Drawing 12]



[Drawing 13]

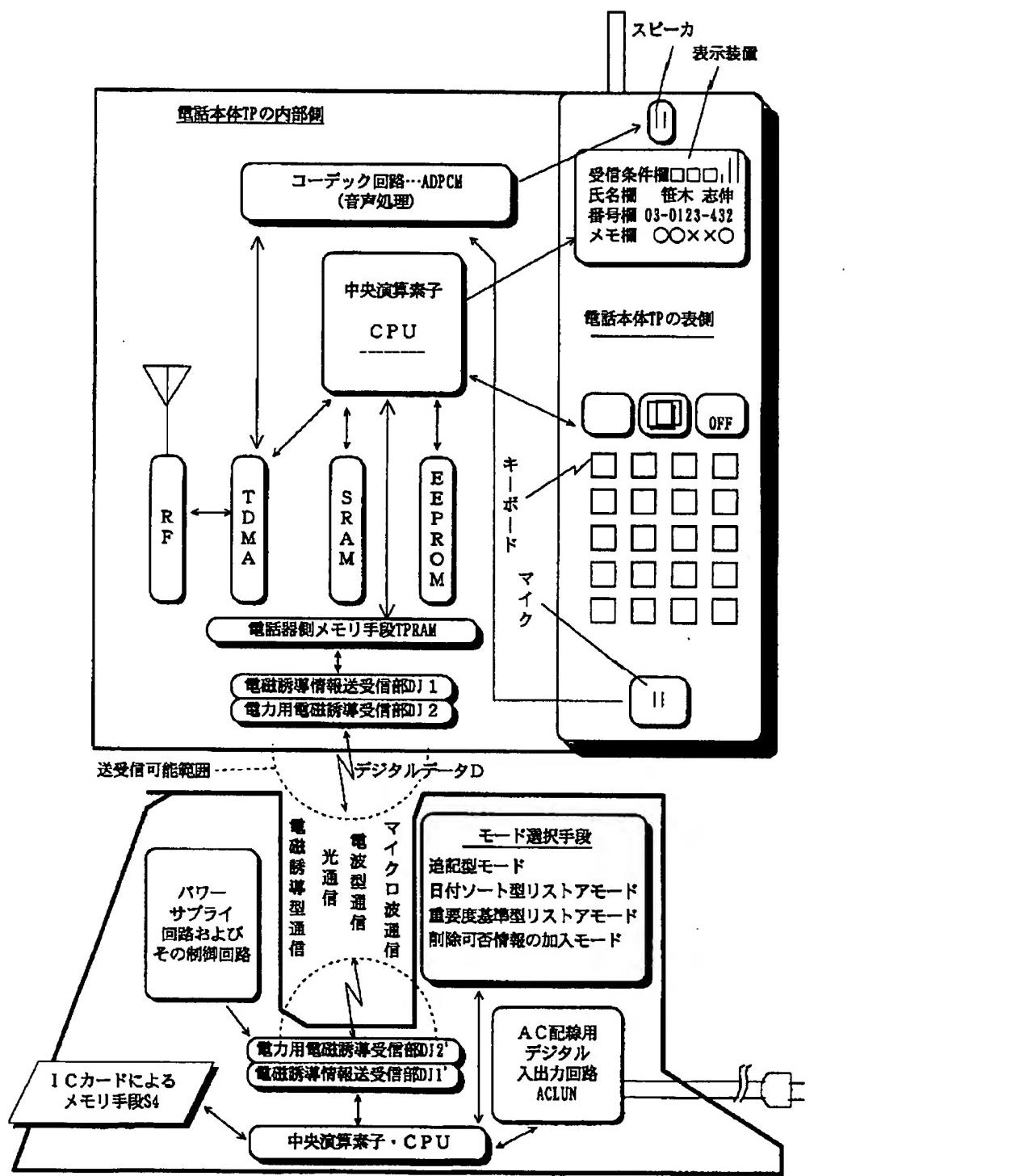


[Drawing 14]



[Drawing 15]

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